



TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No.
0182.00001

Application Of: Swanepoel

Application No. 09/806,800	Filing Date June 25, 2001	Examiner Balsis, Shay L.	Customer No.	Group Art Unit 1744	Confirmation No. 6013
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Invention: A WINDSCREEN WIPER

COMMISSIONER FOR PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:

March 27, 2006

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Art Unit: 1744)
Examiner: Balsis, Shay L.)
Inventor(s): Swanepoel)
Serial No.: 09/806,800)
Filing Date: June 25, 2001)
For: A WINDSCREEN WIPER)

)

APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

By Notice of Appeal filed on March 27, 2006, applicant has appealed the final rejection of claims 1 – 10, 13 and 14 communicated in the Office Action dated August 22, 2005. Applicants submit this brief in support of that appeal.

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REAL PARTY IN INTEREST

The real party in interest is TRICO Products Corporation, having a place of business at 3255 West Hamlin Road, Rochester Hills, Michigan 48309, as evidenced by the Assignment of the Inventors, Andriaan Retief Swanepoel, recorded on June 25, 2001 at Reel 012000 and Frame 0979 in the United States Patent and Trademark Office.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences regarding the present application.

STATUS OF THE CLAIMS

Claims 1 - 12 were originally pending in the PCT application to which this application claims priority. On September 20, 2000, in a paper submitted to the International Preliminary Examining Authority at the European Patent Office, claim 11 was cancelled. Also, claim 12 was canceled by way of a Preliminary Amendment filed April 3, 2001. Claim 13 was added by way of Preliminary Amendment filed July 2, 2004, and Claim 14 was added by way of an Amendment filed November 23, 2004.

Claims 1 – 10, 13 and 14 are currently pending in this application. Claims 1 – 10, 13 and 14 have been finally rejected. The rejection of claims 1 – 10, 13 and 14 is being appealed. A clean copy of claims 1 – 10, 13 and 14 is attached hereto at The Claims Appendix.

STATUS OF AMENDMENTS

Claims 1 – 10 were originally, finally rejected via the Office Action dated February 2, 2004. Applicant filed a Request for Continued Examination, along with a Preliminary Amendment on July

2, 2004. Thereafter, the Examiner issued three more communications on August 23, 2004; January 31, 2005; and May 31, 2005 in connection with this matter. Applicant responded to each of these communications on November 23, 2004; April 18, 2005; and July 6, 2005, respectively. On August 22, 2005, claims 1 – 10, 13 and 14 were finally rejected. Applicant filed a Notice of Appeal on March 27, 2006.

SUMMARY OF THE CLAIMED SUBJECT MATTER

A. Independent Claim 1

The present invention as defined in independent claim 1 is directed toward a *beam blade* windscreen wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam. (Pg. 1, lns. 13 – 18; pg. 2, lns. 34 – 42; Fig. 1.) A force applying member is connected to the backbone at two spaced apart points. Spacing distance, S, between the points falls within a range between $0.1*L$ and $0.35*L$, where L is the total length of the backbone, and both S and L are expressed in millimeters. The curved shape of the backbone, the resiliently flexible material of the backbone, and the disclosed range of S allows the windscreen wiper of the present invention to achieve improved pressure distribution across the length of the wiper. (Pg. 2 – 3.)

B. Independent Claim 2

In another aspect, the present invention as defined in independent claim 2 is directed toward a *beam blade* windscreen wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam. (Pg. 1, lns. 13 – 18; pg. 2, lns. 34 – 42; Fig. 1.) A force applying member is connected to the backbone at two spaced apart points. A ratio, R, of the spacing distance, S, to the total length of the backbone, L, falls within a range between 0.1 and 0.35, where S and L are

expressed in the same unit of measure. The curved shape of the backbone, the resiliently flexible material of the backbone, and the disclosed range of R allows the windscreens wiper of the present invention to achieve improved pressure distribution across the length of the wiper. (Pg. 2 – 3.)

C. Independent Claim 13

The present invention as defined in independent claim 13 is directed toward a *beam blade* windscreens wiper having an elongate, curved backbone made out of a resiliently flexible material. (Pg. 1, lns. 13 – 18; pg. 2, lns. 34 – 42; Fig. 1.) A force applying member is connected to the backbone at two spaced apart points. Spacing distance, S, between the points falls within a range between 0.15*L and 0.35*L, where L is the total length of the backbone, and both S and L are expressed in millimeters. The curved shape of the backbone, the resiliently flexible material of the backbone, and the disclosed range of S allows the windscreens wiper of the present invention to achieve improved pressure distribution across the length of the wiper. (Pg. 2 – 3.)

D. Independent Claim 14

The present invention as defined in independent claim 14 is directed toward a *beam blade* windscreens wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam. (Pg. 1, lns. 13 – 18; pg. 2, lns. 34 – 42; Fig. 1.) A force applying member is connected to the backbone at two spaced apart points. Spacing distance, S, between the points falls within a range between 0.15*L and 0.35*L, where L is the total length of the backbone, and both S and L are expressed in millimeters. At one of the points, the force applying member is connected to the backbone by means of a pin which is received in a longitudinal slot in the backbone so that

relative longitudinal and pivotal movement between the pin and the backbone is permitted. (Pg. 2 – 3.)

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1 – 5, 7 – 10 and 13 – 14 were finally rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,899,800 issued to Wittwer in view of U.S. Patent No. 4,337,547 issued to Hancou. Similarly, claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Wittwer ‘800 patent in view of Hancou ‘547 as applied to claim 1, and further in view of U.S. Patent No. 3,192,551 issued to Appel. Claims 1 – 10 and 13 – 14 were finally rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,485,650 issued to Swanepoel in view of the Wittwer ‘800 patent.

ISSUES

A. 35 U.S.C. § 103

The issue pending in this appeal is whether the invention described in claims 1 – 10, 13 and 14 is obvious and therefore unpatentable under 35 U.S.C. § 103(a) in view of U.S. Patent No. 3,899,800 to Wittwer; U.S. Patent No. 4,337,547 to Hancou; U.S. Patent No. 3,192,551 to Appel; and U.S. Patent No. 5,485,650 to Swanepoel.

ARGUMENT

A. The Examiner’s Rejection

In the final rejection dated August 22, 2005, the Examiner stated:

Claims 1-5, 7-10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wittwer (USPN 3899800) in view of Hancou (USPN 4337547).

Wittwer teaches a wiper comprising a force-applying member (12) connected to the center backbone at two spaced apart points (31, 32). Wittwer teaches a superstructure with four pairs of equally spaced apart claws (30, 31, 32 and 33) that slidably engage with the backing strip (36) by means of claws with pin type structure that engage around the outer exposed longitudinal slot edge portions of the flexible backing strip. The remote claws (30, 33) are at a location 1/8 the length of the wiper blade element in from the ends. The four points of pressure being applied to the backing strip at equally spaced apart locations between the remote pressure points beneath the claws (30, 33). It can be determined that the spacing between the two points (31, 32) is ¼ the length of the wiper blade and the ratio of spacing to the total length is ¼ (see figure below), therefore, $S=0.25*L$ and $R=0.25$ which falls in the ranges claimed by the applicant. The preferred spacing distance S_p between the spaced apart points is *about* $S_p=0.363*L-0.000146*L^2$. The preferred ratio R_p is *about* $R_p=0.363-0.000146*L$. Wittwer teaches all the essential elements of the claimed invention however fails to teach an elongate curved backbone which is made of a single, unitary, resiliently flexible beam.

Hancou teaches a windscreen wiper with an elongated curved backbone. The backbone is made from a single, unitary resiliently flexible beam. The backbone has a free form curvature as well as a compound curvature when in use.

It would have been obvious at the time the invention was made to modify Wittwer's invention with the curved backbone as taught by Hancou to ensure a pre-stress when the blade is pressed upon the surface to be wiped (col. 2, lines 24-32).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wittwer (USPN 3899800) in view of Hancou (USPN 4337547) as applied to claim 1 above and further in view of Appel (USPN 3192551).

Wittwer in view of Hancou teach all the essential elements of the claimed invention however fail to teach that the curved backbone has a varying width and thickness. Appel teaches a curved backbone comprising a varying width and thickness. It would have been obvious to modify the invention of Wittwer in view of Hancou to have a backbone that varies in width and thickness as taught by Appel to provide substantially uniform pressure along the length of contact between the flexible rubber wiping blade and the windshield. Additionally, it would accommodate a correspondingly

smaller radius of curvature while retaining appropriate width for resisting lateral drag loads without undue distortion.

Claims 1-10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swanepoel ('650) in view of Wittwer (USPN 3899800). Swanepoel teaches a windscreen wiper with an elongated curved backbone that tapers uniformly in both thickness and width in a straight line manner from its center to its tips (col. 3, lines 36-37). The backbone is made from a single, unitary resiliently flexible beam. The backbone has a free form curvature as well as a compound curvature when in use. One of skill in the art would by routine experimentation find the optimum thickness and width for the backbone. It would have been obvious to one of skill in the art to make the thickness and width of Swanepoel remain constant to what is desired or required, including as claimed to optimize performance and life of the wiper. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)

Swanepoel teaches all the essential elements of the claimed invention however fails to teach a force applying member which is connected to the backbone at two spaced apart points. Swanepoel teaches a single centrally located connector for releasably connecting the wiper to a wiper arm.

Wittwer teaches a wiper comprising a force-applying member (12) connected to the center backbone at two spaced apart points (31, 32). Wittwer teaches a superstructure with four pairs of equally spaced apart claws (30, 31, 32 and 33) that slidably engage with the backing strip (26) by means of claws with pin type structure that engage around the outer exposed longitudinal slot edge portions of the flexible backing strip. The remote claws (30, 33) are at a locating 1/8 the length of the wiper blade element in from the ends. The four points of pressure being applied to the backing strip at equally spaced apart locations between the remote pressure points beneath the claws (30, 33). It can be determined that the spacing between the two points (31, 32) is ¼ the length of the wiper blade and the ratio of spacing to the total length is ¼ (see figure below), therefore, $S=0.25*L$ and $R=0.25$ which falls in the ranges claimed by the applicant. The preferred spacing distance S_p between the spaced apart points is *about* $S_p=0.363*L-0.000146*L^2$. The preferred ratio R_p is *about* $R_p=0.363-0.000146*L$.

The force-applying member is connected to the backbone in such a manner to permit displacement between the force applying member and the backbone. It would have been obvious at the time the invention was made to modify Swanepoel to use the connector as taught by Wittwer so that the wiper arm will have equally distributed pressure along the blade so that as the blade is brought against the surface of the windshield, the pressure will

conform the wiping lip of the wiping member (34) to the curvature of the surface of the windshield and since the pressure points are equally spaced, more pressure will be exerted in the central portion of the blade to hold the central portion of the blade against the surface of the windshield thereby preventing the blade from lifting from the windshield under forces created by a strong wind current across the windshield (col. 3, lines 1-30).

Applicant respectfully submits that the final rejection of the claims pending in this case is based on hindsight and relies on an improper reconstruction of the prior art, without any motivation in the art to do so. For these reasons as explained in greater detail below, applicant respectfully seeks reversal of the final rejection of claims 1 – 10, 13 and 14 pending in this case.

B. The Prior Art

1. The Wittwer et al. ‘800 Patent

The Wittwer et al. ‘800 patent discloses a conventional “tournament style” windshield wiper blade assembly 10 having a superstructure 12. The superstructure 12 is adapted to be connected to the end of a windshield wiper arm, and the windshield wiper arm applies pressure to the wiper blade assembly 10. (Col. 2, ll. 35 – 37). The superstructure 12 also includes claws 30, 31, 32, 33 that are connected to wiper blade element 14. The wiper blade element 14 includes a wiping member 34 and a backing strip 36. (Col. 2, ll. 45 – 47). However, the Wittwer et al. ‘800 patent does *not* disclose a **beam blade** windscreens wiper that includes an **elongate curved backbone** which is made of a **single, unitary, resiliently flexible beam** as set forth in each of claims 1, 2, 13, and 14 of the present application.

2. The Hancou ‘547 Patent

The Hancou ‘547 patent discloses a windshield wiper assembly including a harness 1 with an elongated piece 2 equipped with claws 3 so as to grasp substantially one half of a wiper blade rubber 4. Opposite to the elongated piece 2, the harness 1 includes a tournament-style yoke 6 with claws 6' used for carrying the second part of the blade rubber 4. (Col. 2, ll. 12 – 19). However, the Hancou ‘547 patent does *not* disclose or suggest a **beam blade** windscreens wiper that includes an *elongate curved backbone* which is made of a *single, unitary, resiliently flexible beam* or a force applying member which is *connected to the backbone* at two spaced apart points as set forth in each of claims 1, 2, 13, and 14 of the present application.

3. The Appel ‘551 Patent

The Appel ‘551 patent discloses a beam blade windshield wiper with a spring backbone element 36 and an attached rubber blade 37. The spring backbone 36 can be attached to an actuating arm via a single attachment clip 41. (Col. 3, ll. 63 – 75; Col. 4, ll. 1 – 3). However, the Appel ‘551 patent does *not* disclose or suggest a force applying member which is connected to the backbone at two spaced apart points *with the spacing distance S between the points being between S = 0.1L and S = 0.35L* as set forth in claim 1. The Appel ‘551 patent also does *not* disclose or suggest a force applying member which is connected to the backbone at two spaced apart points *with the ratio R between 0.1 and 0.35* as set forth in claim 2. Furthermore, the Appel ‘551 patent does *not* disclose or suggest a force applying member which is connected to the backbone at two spaced apart points *with the spacing distance S between the points being between S = 0.15L and S = 0.35L* as set forth in claim 13. Still further, the Appel ‘551 patent does *not* disclose or suggest a force applying member which is connected to the backbone at two spaced apart points *with the spacing distance S*

between the points being between $S = 0.1L$ and $S = 0.35L$, wherein at one of the points, the force applying member is connected to the backbone by means of a pin which is received in a longitudinal slot in the backbone so that relative longitudinal and pivotal movement between the pin and the backbone is permitted as set forth in claim 14.

4. The Swanepoel ‘650 Patent

The applicant here is also the named inventor of the subject matter of the Swanepoel ‘650 patent. The Swanepoel ‘650 patent discloses a beam blade windshield wiper with a spring backbone 12 and an attached rubber wiper blade 14. The backbone 12 has a single, centrally located connector 16 for releasably connecting the wiper 10 to a spring loaded wiper arm. (Col. 3, ll. 1 – 3). However, the Swanepoel ‘650 patent does *not* disclose or suggest a force applying member which is connected to the backbone at *two spaced apart points* as set forth in each of claims 1, 2, 13, and 14.

5. The Windscreen Wiper Assembly of the Present Invention

a. Independent claim 1

In contrast to the related art, the present invention as defined in independent claim 1 is directed toward a *beam blade* windscreen wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam. A force applying member is connected to the backbone at two spaced apart points. Spacing distance, S, between the points falls within a range between $0.1*L$ and $0.35*L$, where L is the total length of the backbone, and both S and L are expressed in millimeters. The curved shape of the backbone, the resiliently flexible material of the backbone, and the disclosed range of S allows the windscreen wiper of the present invention to achieve improved pressure distribution across the length of the wiper.

b. Independent claim 2

In another aspect, the present invention as defined in independent claim 2 is directed toward a **beam blade** windscreen wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam. A force applying member is connected to the backbone at two spaced apart points. A ratio, R, of the spacing distance, S, to the total length of the backbone, L, falls within a range between 0.1 and 0.35, where S and L are expressed in the same unit of measure. The curved shape of the backbone, the resiliently flexible material of the backbone, and the disclosed range of R allows the windscreen wiper of the present invention to achieve improved pressure distribution across the length of the wiper.

c. Independent claim 13

In still another aspect, the present invention as defined in independent claim 13 is directed toward a **beam blade** windscreen wiper having an elongate, curved backbone made out of a resiliently flexible material. A force applying member is connected to the backbone at two spaced apart points. Spacing distance, S, between the points falls within a range between $0.15*L$ and $0.35*L$, where L is the total length of the backbone, and both S and L are expressed in millimeters. The curved shape of the backbone, the resiliently flexible material of the backbone, and the disclosed range of S allows the windscreen wiper of the present invention to achieve improved pressure distribution across the length of the wiper.

d. Independent claim 14

In still another aspect, the present invention as defined in independent claim 14 is directed toward a **beam blade** windscreen wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam. A force applying member is connected to the backbone at two spaced apart points. Spacing distance, S, between the points falls within a range between $0.15*L$ and

$0.35*L$, where L is the total length of the backbone, and both S and L are expressed in millimeters.

At one of the points, the force applying member is connected to the backbone by means of a pin which is received in a longitudinal slot in the backbone so that relative longitudinal and pivotal movement between the pin and the backbone is permitted.

C. Discussion

1. No Motivation to Combine Teachings of References

A rejection based on 35 U.S.C. § 103 must rest on a factual basis, with the facts being interpreted without a hindsight reconstruction of the invention from the prior art. Thus, in the context of an analysis under § 103, it is not sufficient merely to identify one reference that teaches several of the limitations of a claim and another that teaches several limitations of a claim to support a rejection based on obviousness. This is because obviousness is not established by combining the basic disclosures of the prior art to produce the claimed invention absent a teaching or suggestion that the combination be made. Interconnect Planning Corp. v. Fiel, 774 F.2d 1132, 1143, 227 U.S.P.Q. (BNA) 543, 551 (Fed. Cir. 1985); In Re Corkhill, 771 F.2d 1496, 1501-02, 226 U.S.P.Q. (BNA) 1005, 1009-10 (Fed. Cir. 1985). The relevant analysis invokes a cornerstone principle of patent law:

That all elements of an invention may have been old (the normal situation), or some old and some new, or all new, is . . . simply irrelevant. Virtually all inventions are combinations and virtually all are combinations of old elements. Environmental Designs v. Union Oil Co. of Cal., 713 F.2d 693, 698 (Fed. Cir. 1983) (other citations omitted).

A patentable invention . . . may result even if the inventor has, in effect, merely combined features, old in the art, for their known purpose without producing anything beyond the results inherent in

their use. American Hoist & Derek Co. v. Sowa & Sons, Inc., 220 U.S.P.Q. (BNA) 763, 771 (Fed. Cir. 1984) (emphasis in original, other citations omitted).

As the Court of Appeals for the Federal Circuit has noted in the past, “[w]hen a rejection depends upon a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references.” Ecolochem, Inc. v. Southern Calif. Edison, 56 U.S.P.Q. 2d 1065, 1073 (Fed. Cir. 2000). There must be a rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999). This is because “combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability.” Id. Accordingly, to establish a rejection under 35 U.S.C. § 103, a person of ordinary skill in the art must not only have had some motivation to combine the prior art teachings, but also some motivation to combine the prior art teachings in the particular manner claimed. See, e.g., In re Kotzab, 217 F.3d 1365, 1371 (Fed. Cir. 2000). In other words, the Examiner must show *reasons* that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. In re Rouffet, 149 F.3d 1350, 1357 (Fed. Cir. 1998).

Here, in support of the rejection of claims 1 – 5, 7 – 10 and 13 – 14 under 35 U.S.C. § 103 over the Wittwer et al. ‘800 patent in view of the Hancou ‘547 patent, the Examiner states that it “would have been obvious...to modify Wittwer’s invention with the curved backbone as taught by Hancou to ensure a pre-stress when the blade is pressed upon the surface to be wiped.” However, Hancou essentially teaches a modified tournament style wiper assembly, at best. And, even assuming that the Examiner’s characterization of the Hancou reference is correct, the Examiner fails

to identify where, specifically, the motivation to combine the wiper disclosed by Hancou with the tournament style wiper disclosed by Wittwer can be found. Rather, Applicant respectfully submits that the Examiner is engaging in impermissible hindsight and is taking the claimed invention as a blueprint for piecing together the prior art in support of the rejection under 35 U.S.C. § 103. Applicant respectfully submits that there is simply no motivation provided in the Wittwer et al. ‘800 patent or Hancou ‘547 patent to combine any of their teachings. Accordingly, Applicant respectfully submits that this rejection based on 35 U.S.C. § 103 is improper.

In support of the rejection of claim 6 on the basis of the Wittwer et al. ‘800 patent in view of the Hancou ‘547 patent and further in view of the Appel ‘551 patent, the Examiner states that it “would have been obvious to modify the invention of Wittwer in view of Hancou to have a backbone that varies in width and thickness as taught by Appel to provide substantially uniform pressure along the length of contact between the flexible rubber wiping blade and the windshield.” The Examiner continues by stating “it would accommodate a correspondingly smaller radius of curvature while retaining appropriate width for resisting lateral drag loads without undue distortion.” Applicant respectfully submits that the Examiner is again engaging in impermissible hindsight and is taking the claimed invention as a blueprint for piecing together the prior art in support of the rejection under 35 U.S.C. § 103. Applicant respectfully submits that there is simply no motivation provided in the Wittwer et al. ‘800, Hancou ‘547, or Appel ‘551 patents to combine any of their teachings. Accordingly, Applicant respectfully submits that this rejection based on 35 U.S.C. § 103 is improper.

Furthermore, in support of the rejection of Claims 1 – 10 and 13 – 14 under 35 U.S.C. § 103 over the Swanepoel ‘650 patent in view of the Wittwer ‘800 patent, the Examiner stated at page 5 of the Final Rejection that:

It would have been obvious at the time the invention was made to modify Swanepoel to use the connector as taught by Wittwer so that

the wiper arm will have equally distributed pressure along the blade so that as the blade is brought against the surface of the windshield, the pressure will conform the wiping lip of the wiping member (34) to the curvature of the surface of the windshield and since the pressure points are equally spaced, more pressure will be exerted in the central portion of the blade to hold the central portion of the blade against the surface of the windshield thereby preventing the blade from lifting from the windshield under forces created by a strong wind current across the windshield (col. 3, lines 1-30).

Applicant respectfully submits that the Examiner is again engaging in impermissible hindsight and is taking the claimed invention as a blueprint for piecing together the prior art in support of the rejection under 35 U.S.C. § 103. Indeed, the “connector as taught by Wittwer” is nothing more than that commonly found in typical tournament style windshield wiper systems, whereas the Swanepoel ‘650 patent teaches a beam blade with a single connector 16. Applicant respectfully submits that there is simply no motivation provided in the Swanepoel ‘650 or Wittwer et al. ‘800 patents to combine any of their teachings. Accordingly, Applicant respectfully submits that this rejection based on 35 U.S.C. § 103 is improper.

2. Cited Art Does Not Disclose or Suggest Claimed Spacing of Attachment Points

The Examiner relies on the Wittwer et al. ‘800 patent for its teaching of a superstructure 12 attached at four points to the backing strip 36, wherein the spacing between two of the points is within the range claimed in claims 1, 2, 13, and 14. However, the Wittwer et al. ‘800 patent discloses a mounting method for a *tournament style* windscreens wiper assembly. In contrast, the windscreens wiper disclosed in amended claims 1, 2, 13, and 14 of the patent application is a *beam blade* windscreens wiper. The importance of the distinguishing feature of the beam blade type windscreens wiper assembly as opposed to the tournament style wiper assembly cannot be overemphasized in this case. In the windshield wiper art, the term “beam” is used with respect to the

structure which serves to force a wiper blade transversely onto the windshield. This is consistent with the definition of the word “beam” given by McGraw-Hill’s Dictionary of Scientific and Technical Terms (fifth edition): “a body, with one dimension large compared with the other dimension, whose function is to carry lateral loads (perpendicular to the large dimension) and bending movements.”

Here, the Examiner seems to suggest that the backing strip 36 of the Wittwer et al. ‘800 patent constitutes the backbone made of a single, unitary, resiliently flexible beam claimed in each of claims 1, 2, 13, and 14. However, because the Wittwer et al. ‘800 patent discloses a traditional mounting method for a tournament style windscreens wiper assembly, and because the backing strip 36 does not independently force a wiper blade transversely onto the windshield, Applicant respectfully submits that a person having ordinary skill in the art would not recognize the traditional backing strip 36 as being a backbone made of a single, unitary, resiliently flexible beam. Thus, Applicant respectfully submits that the Wittwer et al. ‘800 patent fails to disclose or suggest a **beam blade** windscreens wiper that includes an **elongate curved backbone** which is made of a **single, unitary, resiliently flexible beam** as claimed in each of claims 1, 2, 13, and 14 of the present application.

Accordingly, even if the teachings of the cited references could be properly combined, none of the references, either standing alone or in combination, teach or suggest a beam blade windscreens wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam, and a force applying member connected to the backbone at two spaced apart points, wherein the spacing distance, S, between the points falls within a range between $0.1*L$ and $0.35*L$, wherein L is the total length of the backbone, and wherein both S and L are expressed in millimeters as set forth in independent claim 1.

Likewise, none of the references, either standing alone or in combination, teach or suggest a beam blade windscreen wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam, and a force applying member connected to the backbone at two spaced apart points, wherein a ratio, R, of the spacing distance, S, to the total length of the backbone, L, falls within a range between 0.1 and 0.35, wherein S and L are expressed in the same unit of measure as set forth in claim 2.

Further, none of the references, either standing alone or in combination, teach or suggest a beam blade windscreen wiper having an elongate, curved backbone made out of a resiliently flexible material, and a force applying member connected to the backbone at two spaced apart points, wherein the spacing distance, S, between the points falls within a range between $0.15*L$ and $0.35*L$, wherein L is the total length of the backbone, and both S and L are expressed in millimeters as set forth in claim 13.

Still further, none of the references, either standing alone or in combination, teach or suggest a beam blade windscreen wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam, and a force applying member connected to the backbone at two spaced apart points, wherein the spacing distance, S, between the points falls within a range between $0.15*L$ and $0.35*L$, wherein L is the total length of the backbone, wherein both S and L are expressed in millimeters, and wherein at one of the points, the force applying member is connected to the backbone by means of a pin which is received in a longitudinal slot in the backbone so that relative longitudinal and pivotal movement between the pin and the backbone is permitted as set forth in claim 14.

Therefore, it is respectfully submitted that independent claims 1, 2, 13, and 14 are allowable over the rejection under 35 U.S.C. § 103. Claims 3 – 10 are each ultimately dependent upon claims

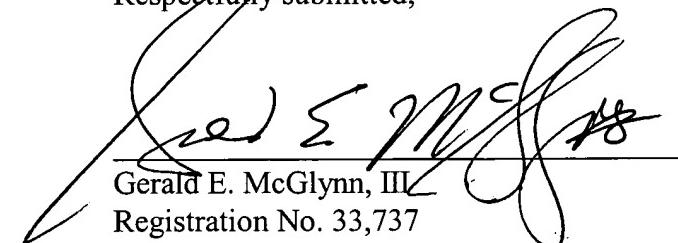
1 or 2 and add perfecting limitations. Accordingly, applicant respectfully submits that claims 3 – 10 are also allowable over the rejection under 35 U.S.C. § 103.

CONCLUSION

In view of the above, it is respectfully submitted that claims 1 – 10, 13 and 14 recite structure that is not disclosed or suggested by the prior art and that is patentably distinguishable from the subject matter of the references of record in this case. As such, the prior art references do not suggest the subject invention. However, even if they did, they could only be applied through hindsight after restructuring the disclosure of the prior art in view of applicant’s invention. A rearrangement and restructure of both the tournament and beam blade style windshield wipers described in the references to derive applicant’s invention would, in and of itself, be an invention.

Applicant respectfully submits that the claims presently pending in this appeal clearly distinguish over the prior art and are therefore allowable. Accordingly, applicant respectfully solicits a reversal of the final rejection and allowance of the claims pending in this case.

Respectfully submitted,



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CLAIMS APPENDIX

1. A beam blade windscreens wiper which includes
an elongate curved backbone which is made of a single, unitary, resiliently flexible beam;

and

a force applying member which is connected to the backbone at two spaced apart points
with the spacing distance S (expressed in millimetres) between the points being between

$$S_1 = 0.1 * L \dots \dots \dots \quad (1)$$

and

$$S_2 = 0.35 * L \dots \dots \dots \quad (2)$$

where the length L is the total length of the backbone expressed in millimetres.

2. A beam blade windscreens wiper which includes
an elongate curved backbone which is made of a single, unitary, resiliently flexible beam;

and

a force applying member which is connected to the backbone at two spaced apart points
with the ratio R of spacing distance S between the points and the total length L ($R = S/L$)

being between

$$R_1 = 0.1 \dots \dots \dots \quad (3)$$

and

$$R_2 = 0.35 \dots \dots \dots \quad (4)$$

where the spacing distance S and the length L are expressed in the same units of measure.

3. The beam blade windscreens wiper as claimed in Claim 1, in which the preferred spacing distance S_p between the spaced apart points is about

$$S_p = 0.363 * L - 0.000146 * L^2 \dots \dots \dots \quad (5)$$

4. The beam blade windscreens wiper as claimed in Claim 2, in which the preferred ratio R_p is about

$$R_p = 0.363 - 0.000146 * L \dots \dots \dots \quad (6)$$

5. The beam blade windscreens wiper as claimed in Claim 1, in which the force applying member is connected to the backbone in such a manner as to permit relative longitudinal displacement between the force applying member and the backbone.

6. The beam blade windscreens wiper as claimed in Claim 1, in which the curved backbone has a varying width and thickness, along its length.

7. The beam blade windscreens wiper as claimed in Claim 1, in which the curved backbone has a constant thickness along its length.

8. The beam blade windscreens wiper as claimed in Claim 1, in which the curved backbone has a constant width along its length.

9. The beam blade windscreens wiper as claimed in Claim 1, in which the backbone has a free form curvature in a plane.

10. The beam blade windscreens wiper as claimed in Claim 1, in which the backbone has a compound curvature.

11. (Cancelled)

12. (Cancelled)

13. A beam blade windscreens wiper which includes
an elongate curved backbone which is of a resiliently flexible material; and
a force applying member which is connected to the backbone at two spaced apart points
with the spacing distance S (expressed in millimetres) between the points being between
 $S_1 = 0.15 * L \dots \dots \dots$ (1)

and

$$S_2 = 0.35 * L \dots \dots \dots \quad (2)$$

where the length L is the total length of the backbone expressed in millimetres.

14. A beam blade windscreens wiper which includes
an elongate curved backbone which is made of a single, unitary, resiliently flexible beam;

and

a force applying member which is connected to the backbone at two spaced apart points
with the spacing distance S (expressed in millimetres) between the points being between

$$S_1 = 0.1 * L \dots \dots \dots \quad (1)$$

and

$$S_2 = 0.35 * L \dots \dots \dots \quad (2)$$

where the length L is the total length of the backbone expressed in millimeters, and wherein at one of the points, the force applying member is connected to the backbone by means of a pin which is received in a longitudinal slot in the backbone so that relative longitudinal and pivotal movement between the pin and the backbone is permitted.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.